PRINCETON UNIVERSITY
PRINCETON, NEW JERSEY
SCHOOL OF ENGINEERING, JOHN C. GREEN FOUNDATION

DEPARTMENT OF AERONAUTICAL ENGINEERING
TH[illegible]S FORRESTAL RESEARCH CENTER

March 5, 1956

To: Commanding Officer
Office of Naval Research
Air Branch/ Code 461
Department of the Navy
Washington 25, D. C.

Subject: Model Study of Dynamic Stability of Helicopter -- Status Report covering the month of February 1956.

Contract N6 onr-27015

H04S Simulation Program:

The model is now on flying status, and calibration of the instrumentation has begun. The initial flights were very satisfactory and it is anticipated that useful data will be obtained by the end of the month.

The forward flight servo drive system working mock up is essentially complete, and shake down runs will begin during the next few weeks.

Forward Flight Facility:

All work on the facility continues on schedule.

Induced Flow Studies:

The test program is continuing in order to cover the following ranges:

Blade collective pitch angle	8°, 9°, 10°
Angle of attack of plane of zero feathering	0°, 5°, -10°
Advance ratio	0-0.30

Smoke will be injected into the tip vortex and its motion will be recorded on movie film as a function of azimuth angle from the blade feathering

axis. The thrust, rotor RPM, and forward speed will be recorded by an oscillograph. It is expected that most of this work will be accomplished during March.

Very truly yours,

Leonard Goland
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LEONARD GOLAND
Chief Project Engineer

LG/nt
cc: 3 - Commanding Officer, ONR, Wash.
1 - Lcdr. A. D. Struble
1 - J. Levy, ONR, N. Y.
1 - Special Devices Center - Code 910
1 - R. Booth, DE 31, BuAer
8 - Office Chief of Trans. Dept. of the Army
1 - Asst. Chief of Staff, G-4, R & D
1 - Commanding General, Fort Monroe, Virginia ATDEV-6
1 - David Taylor Model Basin, Maryland - Code 634
1 - President, Board No. 6, CONARC, Camp Rucker, Alabama